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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,912	08/16/2001	Jeffrey L. Anderson	CM-006B	1698

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EXAMINER

SELLERS, ROBERT E

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 04/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/930,912	Applicant(s) ANDERSON ET AL. g	
	Examiner Robert Sellers	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 9,10,20,21,30,31 and 40-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8,11-19,22-29 and 32-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1712

Claims 42-51 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Claims 9, 10, 20, 21, 30, 31, 40 and 41 are withdrawn as being directed to non-elected species of A polymer. Election was made **without** traverse in Paper No. 8.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 22-31 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Independent claim 22 defines optional cross-linking agent (ii) and optional epoxy resin (iv). Page 15, paragraph 47, line 3 enables the presence of the cross-linking agent. However, there is no mention of an optional epoxy resin which was denoted in claim 26 of parent application no. 08/967,848. The optional epoxy resin should be inserted into paragraph 47 for proper enablement.

Art Unit: 1712

Claims 1-8, 11-19, 22-29 and 32-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The compositions of independent claims 1, 11, 22 and 32 has been characterized as "essentially non-gelled." Page 5, paragraph 16 disclosing the composition and pages 12-13 describing its process of preparation do not set forth any gelation criteria. The sole reference to gelation occurs on page 5, line 1 wherein the objective of polymeric compositions "which do not readily gel" is presented. The metes and bounds of the term "essentially" used to qualify the extent of non-gelling is not defined. The maximum level of gelling permissible within the meaning of "essentially" cannot be ascertained by one skilled in the art.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-8, 11-19, 22-29 and 32-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Nos. 59-142242 and 2-279729.

The following is a reiteration of the rejection presented in the Examiner's answer for parent application no. 08/967,848 (pages 3-4) which was affirmed by the Board of Patent Appeals and Interferences in the decision rendered January 30, 2003.

The limitations of independent claims 1, 11, 22 and 32 are identical to those of claims 1, 13, 26 and 38 in the parent application.

Japanese '242 sets forth the non-gelled reaction (page 3, lines 3-6) of from 60-95 weight percent (page 4, lines 26-28) of an addition polymer having more than one carboxyl group (page 4, lines 1-2) and from 1-60 weight percent of polyethylene glycol having two hydroxy groups (page 3, line 24). The fourth and seventh examples in Table 1 on page 7 shows the reaction product of 60 parts by weight of a carboxy group-containing vinyl polymer (page 5, polymers B-1 and B-2) and 40 parts by weight of polyethylene glycol. The copolymerization of (meth)acrylic acid yields polymers B-1 and B-2 with multiple (meth)acrylic acid repeating units resulting in multiple carboxyl groups within the polymer.

The reaction between the multiple carboxy groups of the vinyl polymer and the two hydroxy groups of polyethylene glycol wherein the weight ratio of vinyl polymer:polyethylene glycol is 60:40 inherently causes a complete reaction of the hydroxy groups due to the quantitative excesses of carboxy groups and amount of carboxy group-containing vinyl polymer relative to the hydroxy groups and proportion of polyethylene glycol.

The claimed molar ratio of addition polymer A:polymer B of from about 3.1 to about 2:1.7 is not recited. It would have been obvious to provide a surplus of carboxy group-containing vinyl polymer over polyethylene glycol of Japanese '242 within the claimed molar ratio range in order to maintain the mechanical strength contributed by the vinyl polymer (page 4, lines 29-31).

Japanese '729 shows the non-gelled (page 7, lines 28-29) reaction product (page 6, lines 2-5) of from 30-99.5 weight percent (page 8, lines 8-9) of an addition polymer of maleic anhydride-grafted styrene/butadiene/styrene copolymer (page 9, the last two lines) and from 0.05-70 weight percent of a polysiloxane with two amino groups (page 10, Examples 6 and 8, and page 12, Table 1). The grafting of maleic anhydride provides a polymer with multiple maleic anhydride repeating units resulting in numerous anhydride groups within the polymer.

The reaction between the multiple anhydride groups of the graft polymer and the two amino groups of the polysiloxane wherein the weight ratio of graft polymer:polysiloxane is 50:50 inherently causes a complete reaction of the amino groups due to the quantitative excess of anhydride groups relative to the two amino groups for equal amounts of graft polymer and polysiloxane.

The claimed molar ratio of addition polymer A:polymer B of from about 3:1 to about 2:1.7 is not recited. It would have been obvious to provide a surplus of anhydride group-containing graft copolymer over the amino group-terminated polysiloxane of Japanese '729 within the claimed molar ratio range in order to prevent greasiness, maintain the miscibility and eliminate bleeding (page 8, lines 11-14).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tobias, Ting et al., Brown et al. or Huemke et al.

Tobias (col. 1, lines 10-18; col. 2, lines 16-17 and col. 3, lines 52-57), Ting et al. (col. 1, lines 54-68 and col. 3, lines 45-46) and Brown (col.1, lines 30-43 and col. 4, lines 27-28) disclose ungelled compositions comprising the reaction product of a carboxy-functional addition copolymer within the limits of claimed addition polymer A with an equivalent deficit of a diglycidyl ether within the confines of claimed polymer B wherein the epoxy groups of the diglycidyl ether are completely consumed by reaction with the carboxy groups of the addition polymer. The disclosed epoxy:carboxy equivalent ratios encompass the claimed molar ratio of A polymer:B polymer.

Art Unit: 1712

Huemke et al. (col. 1, lines 4-23) sets forth the non-gelled reaction product of a base resin (A) containing from 1-3 epoxy or isocyanato groups per molecule within the parameters of polymer B, an amino group-terminated polyisobutylene embraced by addition polymer A possessing amine numbers of from 20-200 mg KOH/g (col. 3, lines 41-42), and an amidoamine wherein "[t]he reaction mixture is then allowed to react at 100°-150°C until no more free epoxy or isocyanato groups are present (col. 4, lines 50-52)." The claimed reaction product does not preclude the additional presence of the amidoamine. The amino:(epoxy or isocyanato) equivalent ratio of from 1:1 to 5:1 wherein as much as 50% by weight of the amino groups are contributed by the amino group-terminated polyisobutylene inherently falls within the claimed A polymer:B polymer molar ratio range.

The burden of proof is shifted to applicants to substantiate that the claimed molar ratio of A polymer:B polymer is not disclosed by the references

(*In re Fitzgerald*, 205 USPQ 594, CCPA 1980).

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Robert Sellers
Primary Examiner
Art Unit 1712

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4/17/03